



Fluoridation

Monthly Operations Report Guidance

331-573 • Updated 10/1/2018

We designed this guide to help public water systems prepare monthly operating reports (MORs) for fluoride to the state Department of Health Office of Drinking Water (Department). We included sample MOR templates for sodium fluoride saturators (form 331-496) and fluorosilicic acid or sodium fluorosilicate (form 331-497).

Copies of the templates are on our [Fluoride for Water Systems webpage](#).

We designed these templates in Microsoft Excel to automate some features.

The following cells in Form **331-496** are automated.

- ◆ Header information Page 2 (system name, system ID, FIP No, Month/Year, Contact Name, and Phone #) auto populates from information you enter on page one.
- ◆ Volume Treated Column.
- ◆ Fluoride Additive Added To Total.
- ◆ Fluoride Additive Volume Used Total.
- ◆ Monitored Calculated Dosage Min, Max, Avg, Count Total, Count within Range, and Percent within Range.
- ◆ Monitored Field Tested Result Min, Max, Avg, Count Total, Count within Range, and Percent within Range.

The following cells in Form **331-497** are automated.

- ◆ Header information Page 2 (system name, system ID, FIP No, Month/Year, Contact Name, and Phone #) auto populates from information you enter on page one.
- ◆ Volume Treated Column.
- ◆ Fluoride Additive Quantity Used Total.
- ◆ Monitored Calculated Dosage Min, Max, Avg, Count Total, Count within Range, and Percent within Range.
- ◆ Monitored Field Tested Result Min, Max, Avg, Count Total, Count within Range, and Percent within Range.

This section explains how to complete the sodium fluoride saturator form.

Page 1

Fluoridation Monthly Operations Report - Supplemental Form

Explain cause and corrective actions taken for each interruption/overfeed.
(Use this page to the report if these occurred during the month. Add additional pages, if needed.)

System Name : 0 _____	System ID: 0 _____
FIP No: 0 _____	Month/Year: 01/00/00 _____
Contact Name: 0 _____	Phone #: - _____

Date(s)	Cause and Response

Certified Officer Signature: _____	Date: _____
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Please send report to: Fluoride@doh.wa.gov (preferred) OR PO BOX 47822, Olympia, WA 98504-7822 OR Fax: 360-236-2252

Section 1 Form Header Information

Enter water system name registered with the Department.

Enter the 5–6 character water system ID number.

Enter Fluoride Injection Point (FIP) number.

Enter month/year of report.

Enter primary contact name for all fluoride related questions.

Enter phone number of primary contact.

Section 2 Date

This section lists the day of the month, starting with a **Prev** cell. Enter the last reading from previous month's report in the **Meter Reading** cell column, to right of the cell marked **Prev**.

Date	Meter Reading (1000 gals)
Prev.	



Section 3 Water Production

Enter your daily water production meter reading (in thousands of gallons) under **Meter Reading** in the corresponding day's cell.

The **Volume Treated (1000 gallons)** is the difference between that day's reading and the previous day's reading.

Section 4 Fluoride Additive

Enter the number of pounds of sodium fluoride added to the saturator on any given day during the month in the **Added To** column.

Enter the meter reading (in gallons) from the fluoride saturator water supply line in the **Meter Reading** column.

Enter the amount of saturated fluoride solution used on any given day in the **Volume Used** column. (This is the difference between today's Meter Reading and yesterday's Meter Reading.)

Section 5 Monitoring

Enter the calculated fluoride concentration based on the raw water fluoride levels added to the calculated added fluoride in the **Calculated Dosage** column.

Calculated Dosage Example

$$((18,000 \times \text{Fluoride Volume Used}) \div \text{Water Volume Tested}) + \text{Raw Water Data}$$

Enter the daily fluoride field result in the **Field Test** column. Either a single daily value or an average of all daily sample values if you take more than one sample during the day.

Section 6 Monthly Totals

The Calculated Dosage and Field Test Min, Max, Avg, Count Total, Count within Range, and Percent within Range automatically calculate with an embedded formula. However, if the formulas fail, please calculate the **Calculated Dosage** totals and **Field Test Results** totals by:

Min—Enter minimum value for month.

Max—Enter maximum value for month.

Avg—Enter calculated average of all monthly results.

Calculation: $\text{Summation of all of the results} \div \text{the total number of results}$

Count Total—Enter number of results entered for month.

Count within Range—Number of results within 0.5–0.9 mg/L.

Percent within Range—Percentage of total results within 0.5–0.9mg/L.

Calculation: $((\text{number of samples within range} \div \text{total number of samples}) \times 100)$

Section 7 Raw Water Data

Enter most recent certified laboratory result for fluoride concentration of your **raw** water.

Section 8 Fluoride Additive Data

Enter manufacturer information for your fluoride additive.

Section 9 Testing and Monitoring

Enter make and model of instrument used for field monitoring

Section 10 Weekly Instrument Calibration

After instrument calibration; enter date, concentration of calibration standard, and result from analysis of calibration standard.

Section 11 Monthly Split Sample

Enter date when split sample was taken and result from certified lab. Results entered in the field result cell on the day the split sample was taken must correspond with the field result reported to the certified lab when split sample was submitted.

Section 12 Process Interruption

Enter start date/time and end date/time of any process interruption. On the second page, there must be a detailed account of the cause and response for every process interruption.

Section 13 Certified Operator Sign-off

A state certified operator must either manually or electronically sign and date page one and page two. On page one, the certified operator must provide their Washington Certification Number.

Fluorosilicic Acid/Sodium Fluorosilicate: Form 331-497

This section explains how to complete the Fluorosilicic Acid/Sodium Fluorosilicate form.

Fluoridation Monthly Operations Report Form
Fluorosilicic Acid / Sodium Fluorosilicate

DOH Form 331-497
Jan. 2016

System Name: _____ System ID: _____
FIP No: _____ 1 Month/Year: _____ / _____
Contact Name: _____ Phone #: _____

Water Production
Date Meter Reading (MG) Volume Treated (MG) Total Remaining (Circle one) (gals) or (lbs) Quantity Used (Circle one) (gals) or (lbs) Calculated Dosage (mg/L) Field Tested Result* (mg/L)

Prev. _____
1 _____
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____
10 _____
11 _____
12 _____
13 _____
14 _____
15 _____
16 _____
17 _____
18 _____
19 _____
20 _____
21 _____
22 _____
23 _____
24 _____
25 _____
26 _____
27 _____
28 _____
29 _____
30 _____
31 _____

Total _____ 0 _____ 0 _____
Min _____ #NUM! _____
Max _____ 0.00 _____
Avg _____ #DIV/0! _____

Count Total _____ 6
Count within Range _____
Percent within Range _____

Fluoride Additive
Total Remaining (Circle one) (gals) or (lbs) Quantity Used (Circle one) (gals) or (lbs)

Monitoring
Calculated Dosage (mg/L) Field Tested Result* (mg/L)

Raw Water Data:
Date of Last Sample: _____
Lab Result: _____ mg/L

Fluoride Additive Data:
☐ Fluorosilicic Acid ☐ Sodium Fluorosilicate
Manufacturer: _____
ANSI-NSF Standard 60 Approved ☐ Yes
Percent strength of acid used: _____ %
Specific Gravity (SG) of acid: _____

Testing and Monitoring:
*Instrument used in field testing (Make/Model) _____
Method used: ☐ SPADNS ☐ Electrode

Weekly Instrument Calibration:
Date Standard mg/L Result mg/L

Date Split Sample Take
Split Sample Result mg

Process Interruption(s) (date/time):
1st Start: _____ End: _____
2nd Start: _____ End: _____
3rd Start: _____ End: _____

Explain cause and corrective actions taken for interruption(s) on back of page.

Please send your report to us by the 10th day of the following month.

Certified Operator Signature: _____ 13 Date: _____
Washington Certification No.: _____

If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711).
This and other publications are available at: <http://www.doh.wa.gov/drinkingwater>

Page 1

Page 2

Fluoridation Monthly Operations Report - Supplemental Form

Explain cause and corrective actions taken for each interruption/overfeed.
(Use this page to the report if these occurred during the month. Add additional pages, if needed.)

System Name: 0 System ID: 0
FIP No: 0 1 Month/Year: 01/00/00
Contact Name: 0 Phone #: -

Date(s) Cause and Response

12

Certified Officer Signature: _____ 13 Date: _____

Please send report to: Fluoride@doh.wa.gov (preferred) OR PO BOX 47822, Olympia, WA 98504-7822 OR Fax: 360-236-2252

Section 1 Form Header Information

Enter water system name registered with the Department.

Enter the 5–6 character water system ID number.

Enter Fluoride Injection Point (FIP) number.

Enter month/year of report.


Enter primary contact name for all fluoride related questions.

Enter phone number of primary contact.

Section 2 Date

This section lists the day of the month, starting with a **Prev** cell. Enter the last reading from the previous month's report in the **Meter Reading** cell to right of the cell marked **Prev**.

Date	Meter Reading
	(MG)
Prev.	



Section 3 Water Production

Enter your daily water production meter reading (in millions of gallons) under **Meter Reading** in the corresponding day's cell.

The **Volume Treated (MG)** is the difference between that day's reading and the previous day's reading.

Section 4 Fluoride Additive

Enter number of gallons or pounds (circle one) remaining in the additive storage tank in **Total Remaining** column.

Enter amount of gallons or pounds (circle one) of additive used in **Quantity Used** column. This is the difference between the today's Total Remaining and yesterday's Total Remaining.

Section 5 Monitoring

Enter the calculated fluoride concentration based on the raw water fluoride levels added to the calculated added fluoride in the **Calculated Dosage** column.

Calculated Dosage Example (based on 23% acid concentration).

$$((\text{Fluoride Quantity Used (lbs)} \times 0.79 \times 0.23) \div (\text{Water Volume Treated (MG)} \times 8.34)) + \text{Raw Water Data}$$

Enter the daily fluoride field result in the **Field Tested Result** column. This is either a single daily value or an average of all daily sample values if more than one sample is taken during the day.

Section 6 Monthly Totals

The **Calculated Dosage** and the **Field Test** Min, Max, Avg, Count Total, Count within Range, and Percent within Range are automatically calculated with an embedded formula. However, if those formulas fail, please calculate **Calculated Dosage** totals and **Field Test Results** totals by:

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Calculation: $((\text{number of samples within range} \div \text{total number of samples}) \times 100)$

Section 7 Raw Water Data

Enter most recent certified laboratory result for fluoride concentration of your **raw** water.

Section 8 Fluoride Additive Data

Mark which type of acid you are using.

Enter manufacturer information for your fluoride additive.

Mark if additive is ANSI-NSF Standard 60 approved.

Enter percent strength of acid used.

Enter Specific Gravity of acid used.

Section 9 Testing and Monitoring

Enter make and model of instrument used for field monitoring

Section 10 Weekly Instrument Calibration

After instrument calibration; enter date, concentration of the calibration standard, and result from analysis of the calibration standard.

Section 11 Monthly Split Sample

Enter the date when the split sample was taken and result from the certified lab. The result entered in the field result cell on the day the split sample was taken must correspond with the field result reported to the certified lab when the split sample was submitted.

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Enter start date/time and end date/time of any process interruption. On the second page, there must be a detailed account of the cause and response for every process interruption.

Section 13 Certified Operator Sign-off

A state certified operator must either manually or electronically sign and date page one and page two. On page one the certified operator must provide their Washington Certification Number.

The Department must receive all completed forms by the tenth of the following month for which you are reporting.

E-mail (preferred method) forms to: Fluoride@doh.wa.gov.

Or mail to

Department of Health
Attn: Fluoride Program
PO BOX 47822
Olympia, WA 98504-7822

Fluoride Program Contact Information

Technical Support

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(360) 236-3138
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